



ADVOCATES
FOR HIGHWAY
AND AUTO SAFETY

January 30, 2001

DEPT. OF TRANSPORTATION
DOCKETS

01 JAN 30 PM 4:51

121547
Docket No. NHTSA-00-8296 -7
U.S. Department of Transportation
Docket Management
Room PL-401
400 seventh Street, S.W.
Washington, D.C. 20590

**Certification; Federal Motor Vehicle Safety Standards;
Tire Identification and Recordkeeping; Consumer Information Regulations
65 FR 75222, December 1, 2000**

Advocates for Highway and Auto Safety (Advocates) welcomes the opportunity to provide comments in response to the National Highway Traffic Safety Administration's (NHTSA) advance notice of proposed rulemaking (ANPRM) on consumer information regulations for tire identification and recordkeeping. 65 FR 75222 (Dec. 1, 2000). This rulemaking was required by Congress in the Transportation Recall Enhancement and Accountability Act (TREAD), Pub. L. 106-414 (Nov. 1, 2000), as a result of the recall of more than 14 million Firestone ATX, ATX II, and Wilderness AT tires. The agency reports that as of December 6, 2000, over 750 complaints have been received and 148 deaths involving these tires and vehicles have been confirmed.¹ During hearings preceding the legislation it became clear that consumers had difficulty identifying the recalled tires because the critical tire identification code number was located only on the blackwall (or inward facing) side of the tires when mounted on the vehicle. In addition, the hearings on the tire failures raised concerns about the quality and availability of consumer information on tire safety and maintenance. Advocates agrees with the agency that this is an appropriate time to reconsider and improve the quality, availability, and usefulness of tire information for consumers.

As an initial consideration, current tire information requirements appear in more than six different standards and sections on tire information labeling.² In this rulemaking the agency should seek to make the myriad of requirements more organized and coherent. One important measure that should be taken is to require that a single, uniform set of information is marked on all tires intended for use on passenger vehicle weighing under 10,000 pounds gross vehicle

¹NHTSA web site, www.nhtsa.dot.gov/hot/Firestone/Update.html.

²Including Federal Motor Vehicle Safety Standards (FMVSS) Nos. 109, 110, 119, and 120, as well as 49 C.F.R. Part 567, *Certification*, and 49 C.F.R. Part 575.104, *Uniform Tire Quality Grading Standards*.



weight. Since pick-up trucks and sport utility vehicles (SUVs) are, for the most part, used in the same manner as passenger cars, there is no reason to exempt the tires used on these vehicles from the same marking requirements mandated for passenger car tires, such as the ratings derived under the Uniform Tire Quality Grading Standards. Any additional information thought necessary because pick-up trucks and SUVs can carry heavier maximum loads and are capable of off-road use, can be required for tires manufactured for use on those vehicles.

Tire Information Content

When initially adopted, little discussion or explanation of the safety-related nature of tire information accompanied the current labeling requirements. It appears that the current information labeled on new passenger tires, retreads, and other tires was generally assumed to be the information that consumers would need.³ Most of the information presently required to be molded onto tire sidewalls, such as tire size, tire identification number, speed rating, load rating, and maximum pressure, as well as the Department of Transportation (DOT) certification symbol, have an unequivocally safety-related purpose. Advocates comments on certain aspects of the information that should be included on the tire, as well as on other labels and consumer oriented-materials, but Advocates believes that it is of critical importance that, whatever the substance of the information required, the information must be presented to the public in a manner that conveys the information accurately and comprehensibly to the greatest possible cross section of the tire-using public.

Tire Ply Information:

The major exception to this may be the required tire ply information. The number of tire plies and the material they are made of are not necessarily safety concerns in and of themselves. While we agree that this information may be useful to knowledgeable consumers, its greatest use and significance may be in tire marketing. Quality construction, as opposed to ply number and composition is the more important safety factor. In several recent instances, a tire manufacturer has petitioned the agency for a determination of inconsequential noncompliance regarding the mislabeling of tire plies. *See* 66 FR 131 (Jan. 2, 2001), and 65 FR 785320 (Dec. 15, 2000). Granting such petitions might indicate that tire ply information may be more relevant for marketing purposes than for safety information. However, the agency may determine that tire

³The importance of a TIN in case of recall is evident and has been addressed by the agency in several regulatory notices, *e.g.*, 35 FR 17257 (Nov. 10, 1973), as has the Uniform Tire Quality Grading Standards and various other labeling issues; however, the agency has never fully discussed the basis for its initial adoption of most other tire label information. Advocates does not question the fact that most of the currently required tire information is safety-related and useful to consumers who can understand its import.

ply information is necessary to inform consumers regarding important features of tire production and, for that reason, should be marked on the tire sidewall. Similarly, whether a tire is a radial tire, tube or tubeless may still be significant for consumers to know. In that case, the information should be required to be presented in a font larger than the minimum now required, and an explanation of the tire ply information should be made available to consumers at the dealership and in an in-vehicle label or consumer information pamphlet.

Tire Inflation and Load Rating:

Advocates agrees that load rating information is important and should be labeled on the tire. However, NHTSA needs to provide specific consumer information about the consequences both of under- and of overinflation of tires in their interdependent relationship with vehicle loads and potential instability. It also is important for the agency to consider improvements in consumer access to and understanding of the importance of tire inflation, both overinflation and underinflation, especially in relation to the load ratings both for each tire on a motor vehicle as well as the maximum gross vehicle weight rating for a laden vehicle. The dangers of underinflation have recently been acutely portrayed in numerous reports to NHTSA about tire failures and subsequent crashes which apparently were triggered, at least in part, by chronic tire underinflation. Underinflated tires are a pervasive problem among passenger vehicles throughout the U.S. and often leads to excessive wear and, more importantly, to the operation of vehicles with high cargo weights on underinflated tires, a dangerous practice.

Tire overinflation is also a source of potentially serious safety problems, particularly in relation to passenger vehicles which are loaded to gross weights substantially above maximum tire and vehicle manufacturer recommendations. In these cases, high speed operation is especially hazardous because badly overinflated tires raised to pressures to attempt to compensate for excessive vehicle cargo loads are subject to failure. Also, a driver's ability to safely control a badly overloaded passenger vehicle with overinflated tires is significantly reduced. This is especially true for passenger vehicles with high unladen centers of gravity and short wheelbases, such as small pickups and sport utility vehicles. A vehicle which goes out of control carrying excessive gross weight, often accompanied by highly unequal load distribution, is more likely to be unable to safely accomplish evasive maneuvers requiring rapid steering inputs. As a result, such a vehicle is more prone to suffer lateral acceleration and yaw, and consequently is more likely to leave the travelway and enter a roadside environment presenting multiple opportunities for encountering tripping features which can initiate rollover. Also, a vehicle incursion into a roadside environment is more likely to involve abrupt changes in grade and encounters with specific hazardous conditions which can overload an overinflated tire even of a vehicle that is not sliding sideways or spinning out of control. This often leads to a blowout and even further vehicle instability which is uncontrollable by the driver.

Uniform Tire Quality Grading Standards:

In addition, the UTQGS information continues to be an important, possibly the most important, single item of consumer information regarding tire performance. Consumers regularly rely on the letter ratings for speed and heat resistance, and the numerical rating for treadwear in making comparative assessments of tire performance. This information should be required to be marked on the tire sidewalls for all light vehicles weighing 10,000 pounds or less, not just tires intended to be used on passenger cars. The UTQGS information should appear in large block lettering presented in contrasting colors to ensure that it stands out from the tire background.⁴

UTQGS Exemption of Snow-Type and Deep Tread Tires:

It is long overdue for NHTSA to include these specialized tires in the UTQGS. Many deep-tread tires sold in the U.S., for example, come without either temperature ratings or speed ratings. In some cases, these tires are intended only for moderate speeds when used on dry surfaces rather than sustained high speed use on Interstate and freeway facilities. Moreover, some of these tires create vehicle handling problems on surfaces other than mud and snow. Yet consumers are not provided any required information about maximum speeds, temperature resistance, and vehicle handling when they purchase these tires. Neither the manufacturers nor NHTSA provide the safety information so that these unrated tires are operated within prudent boundaries of vehicle safety. If these tires can sometimes only be operated at certain speeds and conditions to ensure safe performance and vehicle handling, consumers should be advised of this through the appropriate information supplied in compliance with the requirements of the UTQGS for passenger car tires.

Since Advocates is convinced, however, that most consumers do not understand the information as currently presented on the tire, the agency must reevaluate not just the type of information required, but the manner in which that information is communicated to the public as well.

⁴Nevertheless, many consumers do not understand the production trade-offs implicit in the UTQGS ratings. Consumers should be provided with information that explains in plain terms the important safety considerations that underlie the UTQGS speed, heat resistance, and treadwear ratings. The agency has eliminated the requirement that dealerships make UTQGS information available to consumers. While consumers should be able to locate this information on their own, it is preferable that an explanation of UTQGS be provided at the point of sale.

Consumer Knowledge

It is remarkable that tire identification and required information have changed little in the 30 years since the initial tire labeling requirements were first adopted in the late 1960s and early 1970s. *See* 38 FR 31299 (Nov. 13, 1973); 37 FR 23536 (Nov. 4, 1972); 35 FR 17257 (Nov. 10, 1970); and 32 FR 15792 (Nov. 16, 1967). Despite major changes in tire production and the available types of tires and vehicles over the past three decades, NHTSA has made only marginal changes to tire labeling requirements or even to tire performance standards. Not only has the agency made no comprehensive effort to re-evaluate required tire information over this period of time, it has denied petitions seeking the adoption of modest, consumer-oriented improvements. *See* 48 FR 19761 (May 2, 1983) (denying Center for Auto Safety petition to require tire identification number be located on sidewall visible when tire is mounted on vehicle); and, 57 FR 45759 (Oct. 5, 1992) (denying Herzlich Consulting petition for in-vehicle warning label regarding hazards of tire underinflation and vehicle overloading).

Moreover, NHTSA has repeatedly placed the burden on the public to provide empirical data and substantiation for any prospective change in the labeling requirements. While the agency has asserted that suggested improvements in tire information, such as increasing the size of the font used to provide information molded into tire sidewalls, lack supporting data, the agency itself collected scant data or research during the past 30 years on consumer use and understanding of the tire information required during that time. The present notice once again places the burden on the public to provide data to support changes and improvements in the content and format of tire information. The ANPRM does not present any agency acquired data on consumer behavior, practices or attitudes. In marked distinction to other consumer safety information and labeling issues such as air bags, child restraints, and the new car assessment program (NCAP) ratings, the agency has not initiated research on consumer knowledge regarding the purchase of new tires or consumer maintenance practices, nor has the agency undertaken surveys of when and how consumers make use of available tire information including the information located on the tire sidewalls. The agency has been derelict in its responsibility to collect data on these issues while continually placing the burden of proof on the public to provide empirical data and support for helpful changes to tire labeling regulations. Advocates strongly recommends that, as part of this rulemaking effort, the agency develop and propose a plan to obtain information about consumer awareness of tire safety information, including conducting surveys, sending follow-up questionnaires to consumers who file tire-related complaints, convening focus groups, and providing for other means of information collection.

In the ANPRM, NHTSA asks what tire and safety information consumers want and what type of information consumers find most useful. Obviously, the response will vary with the individual consumer. Research into similar information issues has revealed that some consumers have a greater capacity to understand technical information and other consumers want only the

most important essential information conveyed in a clear and direct manner, and preferably in plain language. The agency should recognize that there is a range of ability, knowledge, time constraints and other factors that affect consumer behavior and, as a result, consumers obtain and use information in varying ways and to varying degrees. In another consumer information context, a National Academy of Sciences panel stated that “[d]ifferent people will want different levels of detail. Some will only want simple summary information. Others will want additional information that . . . provides a broader context for the information. A few will want much greater detail * * *.” *Shopping for Safety*, Transportation Research Board Special Report No. 214, p.114 (National Research Council, 1996). The agency has encountered this situation in other contexts where technical and somewhat complex information must be communicated to a non-technical audience, *i.e.*, the general public.

Information Format

In order to provide critical safety information to as broad a population as possible, the agency must provide information with different degrees of complexity and in varying formats on tire sidewalls, within-vehicle labels, and in vehicle owners’ manuals as well as in other locations and formats. Multiple ways of communicating crucial safety information should be employed. The agency should not rely on only a one-time message contained in only the owner’s manual, for example. The message about tire inflation, vehicle loads and handling, and other safety effects needs to be communicated repeatedly and through the use of different media such as agency brochures, manufacturer labels, owner manual entries, and point-of-sale literature provided by tire manufacturers. This is necessary because Advocates is convinced that most average vehicle users need to be exposed to information, particularly complex or technical information, several times and in varying formats before they comprehend it. Also, since individual consumers have different levels of comprehension, tire and other safety information should be provided to consumers in varying forms and degrees of detail. *Shopping for Safety* recommended a hierarchy of consumer information regarding vehicle safety, operation, and equipment critical to safety. “These differences among consumers suggest the need for a hierarchically organized communication strategy.” *Id.* This same approach is as valid for communicating tire information to consumers. Such a hierarchical system would not necessitate major changes from current practice since the agency has largely taken this approach. Essential safety and performance information, like that already required, would be molded onto the tire, additional information of less critical importance to safety and maintenance would be included on an in-vehicle label, and more extensive information and explanations could be contained in the owners’ manual and in other prescribed vehicle safety information materials. This multi-tiered system should be augmented by additional tire safety and maintenance information available at dealerships (vehicles as well as tires), at the agency and tire manufacturers’ internet website, and through other appropriate information outlets such as libraries. The agency will have to evaluate and prioritize the importance of safety and consumer information in order to

make rational decisions about what information should be included at different levels in the information hierarchy.

Tire Sidewalls:

The first level of information should include important safety, performance and recall information necessary for tire purchase, proper use and maintenance. Since placing information on the tire itself is the most direct means of communication with the consumer, and since space on the tire sidewall is limited, the information required on tire sidewall(s) should be limited to essential safety, performance rating, and tire identification information necessary for recall. Purely commercial or marketing information molded onto the sidewall should not interfere with or overwhelm the required information. Essential safety information such as tire size, tire identification number, speed rating, load rating, and maximum pressure, as well as the Department of Transportation (DOT) symbol should appear on the tire sidewall. Determining which information to include is only part, probably the easier part, of the problem. Presenting information on the tire sidewall which accurately communicates safety information that can be comprehended by the majority of consumers (who are not technically oriented) is the more difficult challenge. Advocates recommends that the agency adopt three basic rules in its approach to tire sidewall information: a) locate the information on both sidewalls or, for tires that can only be mounted in only one direction, on the outside wall of the tire when mounted on the vehicle; b) state the information in plain language that communicates the safety information in terms consumers can understand; and, c) require that the information be molded in font size large enough to be easily read and clearly visible to the unaided eye of consumers with less than average eyesight.

A) Location on both sidewalls:

All information that is regarded as important for tire safety, performance, maintenance, or identification in the event of a recall, should invariably appear on the outboard side of the tire when it is mounted on the vehicle. Information that is required to be located on a tire for any of these purposes should be readily visible and accessible to the vehicle owner or a mechanic. The agency itself indicates that when important safety information such as the tire identification number (TIN) appears only on the inside sidewall

motorists have three inconvenient ways of finding the TINs. They must either: (1) Slide under the vehicle with a flashlight, pencil and paper and search the inside sidewalls for the TINs; (2) remove each tire, find the TIN, and then replace the tire; or (3) enlist the aid of a garage or service station attendant or tire retailer.

65 FR 75222, 75227. This inconvenient choice was faced by many owners of Ford Explorers when they tried to determine whether they had Firestone tires subject to the announced recall of August 9, 2000. This situation is unacceptable.⁵ Advocates is convinced that the location of the TIN on the inside sidewall is not only inconvenient for owners to locate, requiring owners to incur unnecessary effort or expense, but that it also reduces the rate of tire recall responses. The agency should therefore require that all critical safety information be located on the outside (or outboard) sidewall of tires that can only be mounted in one direction, or on both sidewalls for tires that can be mounted facing either direction.⁶

As recently as 1999, NHTSA indicated that it saw no reason to require that the TIN be molded onto both sidewalls. In a notice regarding other issues the agency stated that its justification for requiring the TIN on only one sidewall, originally announced in 1970, was still valid. 64 FR 36807, 36810 (July 8, 1999). In 1970, the agency cited two reasons for requiring the TIN on only one sidewall: first, that inclusion on only one sidewall was sufficient for recordkeeping purposes and, second, concerns about worker safety. While molding the TIN on only one sidewall may be sufficient for purely recordkeeping purposes, the agency itself refuted the concerns about worker safety in its Dec. 15, 1980 notice of proposed rulemaking.⁷ More important, the 1999 notice did not address the issue of expediting consumer identification of recalled and unsafe tires. In the 1980 notice the agency stated that placing the TIN on both sides of tires would "facilitate finding the number and thus should increase the response to recall campaigns." 45 FR 82293. Although the agency later terminated rulemaking on this idea it did so because it could not quantify the benefits of the proposal, not because such benefits did not exist. 48 FR 19761. In 1999, CIMS of Akron, Ohio again suggested marking both sidewalls

⁵Years ago NHTSA had the opportunity to adopt a labeling requirement that would have avoided the recent problem and made it much easier for consumers to find the TINs on recalled tires. In 1980, the Center for Auto Safety specifically petitioned the agency for rulemaking to place the TIN on both sides of blackwall tires, and on the outboard side of other tires. After investigation of the issue the agency granted the petition, 45 FR 82293 (Dec. 15, 1980), but subsequently terminated the rulemaking on the basis it could not quantify the safety benefits, 48 FR 19761 (May 2, 1983).

⁶Some radial tires are symmetrical and can be mounted facing in either direction. With the notable exception of the TIN, much of the information specified under federal motor vehicle safety standard (FMVSS) nos. 109 and 119 (49 CFR §§ 571.109 and 571.119) is already required to be permanently molded onto both sidewalls of every tire subject to those standards.

⁷The agency stated that manufacturers had several safe methods for changing the tire mold plates and that because of production schedules the issue did not present an insurmountable problem. 45 FR 82293, 82294.

with the TIN, citing a tire recall in which many consumers, unable to locate the TIN, came to dealerships for this service. CIMS concluded that one possible reason that many recalled tires remain in service is because of the difficulty in checking the TIN. 64 FR 36809. In light of the experience cited by CIMS, and the recent well reported problems of consumers locating the TIN on the inside sidewall of Firestone tires, there should no longer be any question about the need to mark the TIN on both sides of tires. However, if the agency is still not convinced, it is the agency's obligation, in light of the experience consumers have had with tire recalls, to collect the data to establish whether sufficient benefits will result from marking the TIN on both sidewalls.

If the agency is not convinced that location of the TIN for recall purposes presents a safety issue, the Firestone ATX, ATX II and Wilderness tire recall presents an opportunity to investigate the matter. As part of the data collection suggested above, the agency should contact the owners of Ford Explorers to determine for those owners that located the TIN on their Firestone tires how they did so and, if they did not locate the TIN, why not and whether location on the inside wall of the tire was a factor. At the same time, the agency could gather information on the costs, both out of pocket and in terms of personal time and effort, that was required for the owners to determine whether their tires were subject to the recall. While this Firestone recall is atypical in that it produced far more media attention and publicity than other tire recalls, and therefore more tire owners may have been motivated to check the TIN on their tires than would have done so in a less publicized recall campaign, it may provide the agency with a larger pool of willing survey respondents who could provide the agency with important information on consumer awareness and behavior in response to the recall, as well as benefit/cost information. In light of the experience with the recent and massive Firestone tire recall, it is the agency's responsibility to develop data on this issue before it determines that placement of the TIN on the outboard sidewall is not necessary.⁸

B) Plain Language:

Many, if not most, consumers have little understanding of technical terms or complex instructions and explanations. This has been repeatedly demonstrated by research in many areas including work performed by NHTSA and, in part, has formed the basis for the agency's adoption of the star rating system for NCAP. Advocates has stated in the past, with regard to the TIN, that

⁸For comparison purposes, NHTSA could simultaneously survey owners of other recent but less well reported tire recalls, including owners of Firestone tire models and sizes that were the subject of the agency Consumer Advisory dated September 1, 2000, but were not part of the manufacturer's voluntary recall campaign announced on August 9, 2000. NHTSA website www.nhtsa.dot.gov/hot/Firestone/consumer/consumer_09-01-00.html.

consumers purchasing new tires, are unaware of the meaning of the three-digit date code on passenger vehicle sidewalls. Recurring articles in the consumer and car enthusiast press in past years have repeatedly shown that there is a lack of understanding by consumers of almost all of the current symbol codings supplied on tire sidewalls, including size and speed rating.

Comments dated Dec. 17, 1998, filed in docket number NHTSA-98-4550, *Tire Identification and Recordkeeping, Date of Tire Manufacture* (copy attached). Advocates remains convinced that many consumers who purchase tires and drive motor vehicles have no accurate comprehension of the information presently required on tires. Many consumers have no technical expertise or background, have never attempted to master technical information about tires and, unless they have a specific problem, are unlikely to read the tire safety and maintenance information provided in the vehicle owners' manual. Despite this circumstance, or indeed because of it, the tire sidewall is the probably the major or only point of contact for tire information for such consumers. Bearing this in mind, the information included on tire sidewalls should be presented, to the extent feasible, in plain language and in commonly understood, non-technical terms. Current tire sizing provided through the use of alphanumeric symbols for width, ratio of height to width, and rim size, are not understood probably by millions of regular vehicle users.

English words and abbreviations, including the use of English units of measurement rather than or alongside metric system units, should be used to maximize consumer familiarity. Technical terms and abbreviations should be kept to a minimum. Advocates understands that some technical terms and abbreviations, as well as codes and symbols which are not intuitively obvious to the average consumer, may be a necessary shorthand given space limitations on the tire sidewall and cost factors for tire molds. Every effort should be made to communicate information located on the tire in the simplest and most intuitive terms and format possible in order to assure that the information is understood by the maximum number of consumers. To accomplish this goal it may be necessary to fundamentally alter the concepts and methods of presenting crucial safety-related information to consumers.

This does not mean that important safety information should be excluded because it cannot be communicated in clear, simple wording that can fit on a tire sidewall. Neither does it mean that information should be portrayed in a simplistic manner and that consumers should be expected to make no effort whatever to understand certain common terms or abbreviations. It does mean, however, that the sidewall information should be phrased to the extent possible to communicate with the widest possible audience, not just experts and "gearheads," and should avoid reliance on esoteric rating systems, such as currently required for load rating and speed rating, that are not understandable to the average consumer.

C) Visibility or Readability:

Current requirements prescribe minimum heights for tire safety and consumer information lettering that are only legible under optimal conditions, in well lit areas, and for persons with good vision. For many consumers with a variety of prevalent visual impairments, the current minimum lettering height is inadequate even under good lighting conditions. Information such as the maximum tire pressure becomes very difficult to read, even for people with good eyesight, in poorly lit service stations, under or near street lamps at night, or in other foreseeable circumstances that provide less than optimal viewing conditions. It is far more difficult for consumers to read tire information that is only a fraction of an inch high⁹ if they do not have good eyesight, a fact of life for a large percentage of the U.S. population.

Advocates previously raised this issue in the 1999 rulemaking on the TIN. Advocates observed that a large segment of the U.S. population is aging and suffering from normal degeneration of static acuity, as well as developing a wide variety of fairly common visual pathologies. In addition, Advocates pointed out that many Americans lose contrast sensitivity function (CSF) and thus have poor contrast vision for low-contrast raised lettering, such as the black-on-black relief which is the lowest possible contrast condition used for nearly all tire information. See Advocates' comments to docket number NHTSA-98-4550, pp. 2-3, Dec. 17, 1998.

The agency found these arguments unpersuasive and concluded that lettering size is not a problem based on *ad hoc* judgments of legibility by agency staff, including appeals to the fact that 5/32 inch (4 mm) is equivalent to a 16 font size in word processing, about double the size of the print in the *Federal Register*, and double the size of the lettering found on U.S. quarters. These simplistic examples are not relevant to the conditions under which consumers may be forced to read tire information and they are easily rebutted. First, persons working at computer monitors can sit comfortably and at an optimal distance for their visual capability, the screen provides sharp contrast of lettering on against backgrounds which can be adjusted as required, and the font size of the lettering can be increased as needed to provide optimal visibility. Second, the font size in the *Federal Register* has never been considered adequate by most readers or received any awards from societies of ophthalmology or optometry, and the hard copy

⁹Current requirements permit consumer safety information to be molded in different sizes. The minimum size for part of the TIN lettering is a height 1/4 inch (6 millimeters (mm)) for the first three code groupings, 5/32 inch (4 mm) for the last grouping, the date of manufacture. Information regarding treadwear required by the *Uniform Tire Quality Grading Standards (UTQGS)*, 49 C.F.R. § 575.104, must be a minimum of 5/32 inch (4 mm). Other tire information required by 49 C.F.R. §§ 571.109 and 571.119 can be no smaller than 0.078 inches high, including the name of the manufacturer.

edition can be hand-held and moved close to the eyes to aid readability while the font of the on-line version can be increased in size. Finally, the government does not place important safety information on quarters, and the safety of consumers and their families does not depend on the size of the lettering embossed on coinage. Moreover, the agency suggested that persons with poor static acuity or impaired CSF could use a magnifying glass to check the TIN against recall notices. 64 FR 36810. The agency position is untenable, and it should reconsider its attitude toward consumers with visual impairments.

Advocates has provided information that is readily verifiable regarding the visual difficulties many Americans may face. It is the agency's responsibility to investigate the issue and to research whether the current size of tire information is adequate or should be increased. Moreover, it is quite common for manufacturers to mold the company name and tire model name in lettering two inches high or more that is also presented in stark white-on-black contrast. Most companies must evidently disagree with the agency that lettering as small as 5/32 inch (4 mm) is adequate to convey consumer information since company information is molded in highly visible lettering sometimes larger by more than an order of magnitude.¹⁰ This suggests that the agency should revise its minimum requirements for safety and performance information in order to adequately convey this information to the public. Larger, more visible lettering would also increase public awareness of the information by constantly reminding consumers of its presence when they look at tires. Advocates is convinced that if manufacturers can find the room to place the company name and tire model in large contrasting lettering, then minimum requirements for much larger, more legible safety-related information are clearly reasonable and appropriate.

In-Vehicle Safety Information Booklet:

The agency should require an in-vehicle safety publication that, apart from the vehicle owners' manual, provides explanations of the operation and use of tires, safety belts, front air bags, side air bags, anti-lock braking systems and other safety-related systems and equipment. This booklet would be dedicated solely to communicating safety information to consumers with no technical training. With regard to tire information, the booklet would serve as a halfway house between the terse information located on the tire sidewall, and the more complete and technical information compiled in the vehicle owners' manual. Although the vehicle owners' manual contains detailed information pertaining to the operation of the vehicle and vehicle safety systems, it is not considered to be a "user friendly" resource by most consumers. Many people,

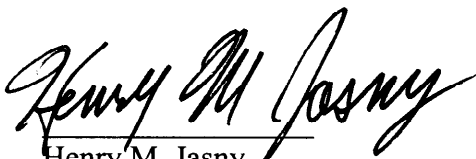
¹⁰The agency states that many tire manufacturers use symbols larger than 5/32 inch (4 mm) for the date code. 65 FR 75225 n.5. These manufacturers may use 1/4 inch (6 mm) lettering height in order to give the TIN a uniform appearance. The agency should collect data on company practices regarding lettering height and whether companies exceed the prescribed minimum lettering height for any other tire information.

especially those with no technical background, find owners manuals to be complex and intimidating, refer to them rarely, and usually only when a specific operational or safety problem is encountered. This contributes to the fact that most vehicle owners (as well as drivers who do not own vehicles) do not read the information in the owners' manual and do not familiarize themselves with the operation of vehicle safety systems.

A dedicated safety booklet, shorter in length and more readable than the owners manual, printed in a large font size and containing clear diagrams would make essential safety information more comprehensible and would be more accessible to the average vehicle user. The format of this information could take one or more forms. One format could consist of laminated or glossy cards each containing a simple summary or outline of safety information on a different topic including tires, analogous to the safety cards provided for each passenger in commercial airline flights. Another format is that of a booklet providing diagrams accompanied by text with more detailed discussion of safety issues affecting tire performance. Some of the information that could be included for tires is already available in the NHTSA publication *Tires: Traffic Safety Tips*, NHTSA (1996), but most consumers do not know about this publication or have access to it (even though it appears on the agency website).

An in-vehicle safety booklet could provide explanations and discussion of the information located on the tire sidewall. Explanations of the maximum cold inflation load limit, load rating, and speed rating (which is often provided although not required), as well as the tire size and UTQGS information should be available in every vehicle through materials that are easy for the average person to use and comprehend. The tire section could also apprise consumers of additional information, such the existence and meaning of treadwear indicators. While the treadwear indicators provide very useful information, they are only effective if consumers know they are imbedded in tires and also understand the information they provide. The average consumer, by and large, is unaware of treadwear indicators.

These formats, a safety booklet and glossy cards, could be combined and the agency could require the information be placed in every vehicle glove compartment. Since it would be easier to read and understand, and would be focused entirely on safety systems and equipment, a dedicated safety booklet would have a much greater probability of being read and reviewed on a repeated basis by vehicle owners and users. This information would not have to be repeated in the vehicle owners' manual, although more detailed explanations, where required, would continue to be part of the vehicle owners' manual.



Henry M. Jasny
General Counsel



ADVOCATES
FOR HIGHWAY
AND AUTO SAFETY

December 17, 1998

Docket No. NHTSA-98-4550
U.S. DOT Docket Management
U.S. Department of Transportation
400 Seventh Street, SW, Room PL-401
Washington, DC 20590

**Tire Identification and Recordkeeping: Date of Tire Manufacture
Notice of Proposed Rulemaking, 63 FR 55832 et seq., October 19, 1998**

Advocates for Highway and Auto Safety (Advocates) is pleased to submit the following comments in response to the National Highway Traffic Safety Administration's (NHTSA) proposed rule amending 49 CFR § 574.5. This agency regulation requires new tire manufacturers and tire retreaders to label a sidewall of each tire with an identification number and mark, tire size symbol, date of manufacture, and also permits them to apply an optional descriptive code.

The current regulation, promulgated in 1970, provided, among other things, for identifying the manufacturing date of a tire through the use of a three-symbol code indicating the week and year in which it was produced. The first two symbols show the week (01 through 52) and the third symbol represents the last digit of the four-digit calendar year (e.g., "8" for 1998).

It is clear that many, if not most, consumers purchasing new tires, are unaware of the meaning of the three-digit date code on passenger vehicle sidewalls. Recurring articles in the consumer and car enthusiast press in past years have repeatedly shown that there is lack of understanding by consumers of almost all of the current symbol codings supplied on tire sidewalls, including size and speed rating. Also, NHTSA is aware that this low level of consumer awareness has a substantial economic effect, among them "the unscrupulous practice



of selling old tires to unsuspecting customers who think that they are buying recently produced tires." 63 FR 55832.

NHTSA proposes in this notice to reduce the size of the date code on tire sidewalls from 6mm to 4mm, or from one-quarter of an inch to five-thirty-seconds of an inch, while augmenting the code from a three-numeral to a four-numeral system. The agency avers that a piece of sidewall with the smaller numerals was examined by personnel "who indicated that the 4 mm digits were clearly readable. The reduction of the size of the digits is so slight as to be barely perceptible." Id. at 55834.

Advocates regards these assertions as a thoroughly inadequate basis for amending a regulation aimed at improving consumer detection and comprehension of important tire sidewall information. Visual detection and comprehension of symbols, including letters and numerals, is a complex function which can be compromised in a wide variety of ways. NHTSA proposes to reduce the size of numerals providing tire manufacture dating information by one-third when the number of older citizens in the U.S. and their percentage representation in the general population has soared over the past two decades and is projected to increase at an accelerating pace well into the next century.

As they age or experience the problems of a wide variety of visual pathologies (e.g., cataracts, glaucoma, macular degeneration) people often suffer degradation of static acuity and, most importantly, usually lose Contrast Sensitivity Function (CSF) in their foveal vision. Loss of both static acuity and/or contrast vision is especially common among older people suffering

from cataracts and diabetic-related visual disorders, especially retinopathy.¹ In fact, it is well-established by opthamologic practice that many hundreds of thousands of people may have excellent static acuity of 20/20 Snellen and yet have extraordinarily poor contrast vision or CSF.

CSF is a measure of the visual system's ability to distinguish any object against its background or visual context.² CSF, accordingly, is a direct measure of visual function rather than binocular sensory function. Separate testing must be conducted by health care providers and other authorities concerned with visual capability to determine the extent of any loss of CSF.³ The standard Snellen static acuity test provides no information on contrast vision ability because the standard chart provides block letters in deeply saturated black against a stark white

¹Many thousands of licensed drivers suffer from diabetic retinopathy which often is non-proliferative. However, non-proliferative or background retinopathy frequently leads to macular edema which involves a gradual blurring of vision. One of the visual disabilities associated with macular edema is considerable difficulty with any close visual work, such as reading. This condition would make it very hard for consumers to read five-thirty-seconds black-on-black date code numerals. See, e.g., Gary Cassel, et al., *The Eye Book: A Complete guide to Eye Disorders and Health*, The Johns Hopkins University Press, 1998.

²Losses in low-contrast acuity correlate closely with the centration of the ablation zone. People who have less-centered ablations also have greater deficits in low-contrast visual acuity.

³There are various systems now in use to measure contrast sensitivity which is presented as a curve plotting the lowest contrast level an individual can detect for a given size target. The x-axis of the curve is for spatial frequency, while the y-axis is for contrast sensitivity. Accordingly, low spatial frequencies are fat gratings and high spatial frequencies are thin gratings. Contrast sensitivity is then the inverse of contrast level. Therefore, the higher the contrast sensitivity, the lower the contrast level at which the individual can detect a target. Most commercially available contrast sensitivity tests provide measures for four or five size bar patterns (spatial frequencies) and each of these spatial frequencies is presented at eight to ten contrast levels. When an individual is tested for the highest contrast sensitivity level s/he can detect for each spatial frequency, this results in plots for rendering their specific CSF curve.

background, thus providing the very highest possible object contrast. In addition, Snellen tests are conducted in good lighting conditions.

Tire sidewall information consists of letters and numerals in black-on-black relief, the lowest possible contrast conditions. It is clear that with each marginal reduction in size, not only will some significant portion of the U.S. population be unable to read the smaller numerals used for date coding because of inadequate static acuity vision, an additional segment of the population will be unable to read the numerals because of impaired CSF.

Advocates is dismayed by this proposal. Without any acknowledgement of the static acuity and CSF problems afflicting a large and growing proportion of the U.S. population, NHTSA has offered to reduce extremely low contrast dating numerals to even a smaller size in exchange for increasing the date code from three to four digits. The agency has no information of any kind in the rulemaking record demonstrating to what extent this will increase consumer understanding, as well as no information resulting from an investigation of the ability of a representative cross-section of the U.S. population to see black-on-black numerals of the proposed size. Indeed, the agency has no information of record on the extent to which the larger, 6mm numerals currently required can be seen and read by representative parts of the U.S. population.⁴

⁴In fact, NHTSA has nothing of record either in the preamble of its proposed amendment or filed with the administrative record demonstrating that consumer comprehension of a four-digit date code is superior to a three-digit system. Although Advocates acknowledges that a four-numeral approach is intuitively appealing, the agency has relied on a conclusory belief that consumers will be aided in better ascertaining the date of tire manufacture with a four-numeral regime than the current three-numeral code. This is similar to the perfunctory and unbuttressed judgment of agency personnel that a 4mm code is just as easy to read as a 6mm code. In both instances, the agency assumes as a given what must be demonstrated with appropriate evidence to sustain a regulatory amendment.

Advocates for Highway and Auto Safety
Docket No. NHTSA-98-4550
December 17, 1998
Page 5

Given the public philosophy that underlies the Americans With Disabilities Act, i.e., to increase the accommodation of a wide array of Americans whose needs are not met by current practices involving, among other things, the task of visual detection and comprehension, Advocates believes that NHTSA has offered a proposed amendment without any foundation in the administrative record of this rulemaking. Arguments relying on reduced space on tire sidewalls, including reduced vertical cross-section width, are not sustainable even upon casual inspection. Id. at 55833. Manufacturers appear to have no trouble even on sport performance tires in supplying very large letters and logos emblazoning brand and model names. Advocates thinks that at least as much attention to the need for improved legibility and comprehension by the American consumer should be provided by both NHTSA and the tire manufacturing industry.

In this regard, Advocates also believes that the tire sidewall informational regime in effect since 1970 is in need of fundamental overhaul: important consumer information is not comprehensible to many, if not most, shoppers and the legibility of that information to consumers with both poor static acuity and low CSF is highly suspect at a minimum. If NHTSA believes that tire sidewall information provides a crucial information parameter for consumers to rely on for buying tires wisely, safely, and economically, while reducing the potential for fraud, it needs to apply more than a casual attitude towards amending this regulation.

Respectfully submitted,
ORIGINAL SIGNED
Gerald A. Donaldson, Ph.D.
Senior Research Director